3-1-1974

Powdery Mildew of Garden Flowers

Paul C. Pecknold

Donald H. Scott

Walter R. Stevenson

Adm - Yes
Replaces earlier editions

Control PLANT DISEASES

in yard and garden

BP-1-4
March 1974

Powdery Mildew of Garden Flowers

Paul C. Pecknold, Donald H. Scott, Walter R. Stevenson

Powdery mildew is a common disease of garden flowers. It generally occurs in late summer or early fall, especially if the weather is cool and night dews are heavy enough to remain on the plants during the morning. Flowers most often affected are chrysanthemum, dahlia, delphinium, honeysuckle, ivy, lilac, phlox, privet, rose, snowberry and zinnia. Roses may be attacked as early as June.

SYMPTOM AND CAUSE

Mildew is easily recognized. It appears as white, powdery blotches on leaves, stems and buds (see Figures 1 and 2).

Any one of seven closely-related fungi can cause powdery mildew. These fungi usually first attack leaves that are crowded and close to the ground. Fungus spores are

Figure 1. Mildew on roses.

Figure 2. Mildew on lilacs.

COOPERATIVE EXTENSION SERVICE, PURDUE UNIVERSITY, WEST LAFAYETTE, INDIANA
Department of Botany and Plant Pathology, Life Science Building

Table 1. Materials effective in controlling powdery mildew

Chemical	Sold as	Remarks
Benomyl	Benlate, etc.	A good spreader-sticker is necessary.
Cycloheximide	Actispray, Actidione-PM, etc.	May damage foliage.
Dinocap	Karathane-WD or Miller's Garden Karaspra, etc.	Use with a good spreader-sticker; may damage foliage.
Sulfur	Various trade names	May damage foliage.

spread to upper leaves and to nearby plants by wind or splashing rain. Once a plant is infected, the leaves turn yellow and drop prematurely. Flower buds may fail to open or develop normally. Mildew also weakens perennials and makes them more subject to winter injury.

CONTROL MEASURES

Gardening Practices

Powdery mildew is favored by prolonged periods of wet foliage. Maintaining conditions that favor rapid drying of foliage will help reduce disease incidence. Plant powdery mildew susceptible flowers in open areas where they will not be crowded. Plants in shade are more prone to mildew than those growing in sun. Prune during the summer to thin out any dense foliage. This will not lessen plant bloom but will increase aeration in the garden. Avoid nightly sprinkling during August and September. Instead, soak the soil as needed.

Powdery mildews are generally most severe on young succulent growth which excessive nitrogen fertilizer promotes. A balanced fertilization program is advisable in which nitrogen fertilization is lowered and potassium fertilization is increased.

In the fall, clean up and dispose of all mildew-infected plant debris. This will help to reduce the amount of disease next year.

Chemical Control

In most years, chemical spraying or dusting is necessary for adequate control on susceptible varieties along with the gardening practices just mentioned. Powdery mildew can occur anytime throughout the growing season; apply fungicide at the first sign of disease. To insure against fall infection, start spray applications no later than August 15, and repeat at 10 to 14 day intervals through September if rainy fall weather occurs.

Powdery mildew can be effectively treated with chemicals. Under Indiana conditions, Benlate appears most effective. Other materials that have been used successfully in the control of powdery mildew are listed in Table 1.

These fungicides will control mildew if plants are sprayed or dusted properly. A single application in August will not suffice. Spray or dust every week throughout the fall if conditions favor mildew development. For best coverage, apply fungicides in the

late afternoon or early evening when the air is still. For best results on hard to wet foliage, such as roses, addition of a spreader-sticker to the spray mixture is suggested.

When used as directed, fungicides are valuable tools in plant disease control. ALWAYS READ THE LABELS ON CONTAINERS TO DETERMINE CONTENTS AND DIRECTIONS FOR USE.

The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by the Indiana Cooperative Extension Service is implied.

May, 1974

Cooperative Extension Work in Agriculture and Home Economics, State of Indiana, Purdue University and U. S. Department of Agriculture Cooperating. H. G. Diesslin, West Lafayette, Indiana. Issued in furtherance of the Acts of May 8 and June 30, 1914. It is the policy of the Cooperative Extension Service of Purdue University that all persons shall have equal opportunity and access to its programs and facilities without regard to race, religion, color, sex or national origin.